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Abstract

The meaning maintenance model asserts that following a meaning threat, people will affirm any meaning frameworks that are available. Three experiments tested (a) whether people affirm alternative meaning frameworks after reading absurdist literature, (b) what role expectations play in determining whether absurdities are threatening, and (c) whether people have a heightened need for meaning following exposure to absurdist art. In Study 1, participants who read an absurd Kafka parable affirmed an alternative meaning framework more than did those who read a meaningful parable. In Study 2, participants who read an absurd Monty Python parody engaged in compensatory affirmation efforts only if they were led to expect a conventional story. In Study 3, participants who were exposed to absurdist art or reminders of their mortality, compared to participants exposed to representational or abstract art, reported higher scores on the Personal Need for Structure scale, suggesting that they experienced a heightened need for meaning.

Keywords

meaning, self

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The meaning maintenance model (Heine, Proulx, & Vohs, 2006; Proulx & Heine, 2006) posits that a good deal of the social psychological literature can be summarized by the following statement: When a committed meaning framework is threatened, people experience an arousal state that prompts them to affirm any other meaning framework to which they are committed. Over the past 40 years, social psychologists have demonstrated that threats to a variety of meaning frameworks (e.g., self-concept, Steele, 1988; social justice systems, Jost, Banaji, & Nosek, 2004; control beliefs, Kay, Gaucher, Napier, Callan, & Laurin, 2008) can prompt people to affirm alternative meaning frameworks that share content with the threatened framework. Recent evidence suggests that following a given meaning threat, people will affirm alternative meaning frameworks that share no content with the meaning framework that was threatened (Proulx & Heine, 2008). Accounts of why people would affirm unrelated meaning frameworks following a meaning threat can first be found in existentialist theory, which posited a general arousal state that follows the violation of meaning frameworks to which the individual is committed (e.g., Camus, 1955; Heidegger 1953/1996)—an arousal state that can be assuaged by affirming any other meaning framework to which one is committed.

In the psychological literature, this proposed arousal state has gone by many names, from *uncanniness* (Freud, 1919/1990), to *disequilibrium* (Piaget, 1937/1954), to *dissonance* (Festinger, 1957), and, more recently, to *uncertainty* (Hogg & Mullin, 1999; McGregor, Zanna, Holmes, & Spencer, 2001; Van den Bos, 2001). Although a variety of laboratory experiments have directly measured arousal states that follow from different meaning violations (e.g., anterior cingulate cortex [ACC] activation, Inzlicht, McGregor, Hirsh, & Nash, 2009; cardiovascular constriction, Mendes, Blascovich, Hunter, Lickel, & Jost, 2007), it has yet to be determined which of these arousal or activation states provokes compensatory affirmation efforts. Nevertheless, the causal role of *some* mode of arousal in compensatory affirmation efforts can be inferred, insofar as compensatory efforts are known to cease if, following

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a meaning threat, participants are given the opportunity to misattribute the arousal they are experiencing (e.g., Kay, Moscovitch, & Laurin, in press; Proulx & Heine, 2008; Zanna & Cooper, 1974). The studies presented in this article follow from the meaning maintenance model to address whether absurdist art, literature, and humor may arouse an *uncanny* feeling and provoke compensatory affirmation efforts.

The Uncanny Experience

Freud's discussion of *uncanniness* offers insight into the notion of the uncanny. In his classic 1919 essay, *The Uncanny* (1919/1990), Freud observed that not just any unfamiliar experience will constitute a meaning threat and arouse a sense of the uncanny. Rather, uncanniness is the feeling aroused by unfamiliar experiences in *familiar* situations. It is only the unfamiliar familiar (*unheimliche heimliche*) that threatens meaning frameworks and arouses a feeling of uncanniness. In wholly unfamiliar settings, there are fewer expectations to violate, and moreover, one may *expect* unexpected experiences. Accordingly, the presence of unusual events confirms, rather than violates, one's current meaning framework. For example, tourists visiting exotic locales expect to encounter events that are new and unfamiliar and therefore may not view these experiences as meaning threats. By contrast, incongruous experiences in familiar settings constitute an *unexpected* unexpected and therefore provoke that unique sense of the uncanny.

What is the uncanny feeling elicited by absurd experiences? Earlier theorists typically offered one of two perspectives. Freud spent much of *The Uncanny* outlining the manner in which unfamiliar juxtapositions of familiar representations arouse the titular emotional experience. Two decades later, Breton's *Manifestoes of Surrealism* (1924/1969) elaborated on Freud's ideas and highlighted unexpected juxtapositions as the center of the emerging absurdist movement. Absurdity then came to be understood as unfamiliar juxtapositions of otherwise familiar elements. Following from this understanding, Dalí, Buñuel, and Magritte, respectively, exposed the masses to melting clocks, razorblades slashing eyeballs, and well-dressed men with apples hiding their faces. In this context, the absurdities presented by the absurdists represented a thrilling escape from the constraints of rationality (Fowlie, 1950).

Yet not everyone agreed that the uncanny is experienced as a thrill. For Kierkegaard (1843/1996) and other existentialists, uncanniness was not associated with the thrill of freedom but rather with *Fear and Trembling*. Camus (1955) conceived that the absence of expected associations may eventually cause people to become "undermined," a state that would culminate in "the divorce between a man and his life, the actor and his setting which is properly the feeling of absurdity . . . there is a direct connection between this feeling and the longing for death" (p. 5).

Little research has been conducted on the experience of absurdist (i.e., unfamiliar familiar) art and literature. Marketing researchers have demonstrated that advertisements featuring images with familiar elements arranged in an unfamiliar manner facilitate liking for whiskey (Kahle & Homer, 1986) and wine coolers (Arias-Bolzmann, Chakraborty, & Mowen, 2000). These findings are interpreted in terms of the presence of absurd juxtapositions in print advertisements enhancing memory for the images and indirectly boosting attraction to the product. We suggest that these findings could also be interpreted as people affirming something with which they are familiar (i.e., the advertised product) following the uncanny imagery (i.e., familiar elements arranged in an unfamiliar manner). This interpretation follows from the meaning maintenance model, which predicts that under certain circumstances people will respond to meaning threats by recruiting alternative patterns of associations, whether by affirming alternative meaning frameworks to which they are already committed or by abstracting conceptually unrelated meaning frameworks (Heine et al., 2006; Proulx & Heine, 2009). No empirical work has demonstrated compensatory affirmation following exposure to absurdist art and literature.

Meaning Maintenance Model

To make sense of the relations between uncanny experiences and meaning affirmation, it is important to consider why it is that people seek meaning from their experiences at all. The meaning maintenance model claims that people are motivated to organize their thoughts and experiences into meaning frameworks, which are their mental representations of expected associations. When people have experiences that threaten expected associations—regardless of the content—they experience an aroused state that motivates them to regain meaning by affirming an alternative meaning framework. Importantly, the meaning maintenance model proffers that this affirmation occurs even if the alternative framework shares no content with the meaning framework that was threatened. The basis for this claim is an integration of several theoretical frameworks in the existentialist and social psychological literatures.

For example, many theorists have argued that people are motivated by a need for expected associations (Antonovsky, 1979; Camus, 1955; Epstein, 1981; Neuberg & Newsome, 1993). Because of this motivation, people construct frameworks of expected associations. Concepts such as paradigms (Bruner, 1990), scripts (Nelson, 1981), and schemata (Intraub, Gottesman, & Bills, 1998; Kuethe, 1962; Markus, 1977; Piaget, 1937/1954) are types of meaning frameworks (cf. Baumeister, 1991). When people experience an event that violates mental representations of expected relations, they often experience an aversive, general arousal state that has been called the feeling of the absurd (Camus, 1955), angst

(Heidegger, 1953/1996), uncanniness (Freud, 1919/1990), disequilibrium (Piaget, 1937/1954), dissonance (Festinger, 1957), and uncertainty (e.g., Hogg & Mullin, 1999; McGregor et al., 2001; Van den Bos, 2001).

Following this aroused state, people have been known to affirm alternative meaning frameworks. Fluid compensation (Tesser, 2000), worldview defense (Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994), worldview verification (Major, Kaiser, O'Brien, & McCoy, 2007), self-affirmation (e.g., Steele, 1988), system justification (Jost et al., 2004), compensatory control (Kay et al., 2008), and compensatory conviction (McGregor et al., 2001) are processes that involve meaning-framework affirmation. Under certain circumstances, this general arousal state may motivate people to affirm meaning frameworks that are conceptually unrelated to the meaning framework that was threatened. We conceptualize these as *meaning maintenance* processes, which is defined as an effort to compensate for threatened expected associations by affirming other expected associations to which one is committed, regardless of their content.

The social psychological literature catalogs an array of compensatory affirmation processes following from threatened frameworks. For example, studies testing system justification theory have demonstrated people's efforts to affirm social justice beliefs following threats to related social systems (Jost et al., 2004). Studies testing terror management theory (Greenberg et al., 1994) have demonstrated that reminders of one's mortality cue people to affirm cultural worldviews that provide a sense of symbolic immortality. When one's sense of personal control is threatened, people may affirm their belief in an alternative controlling power, such as God or government (Kay et al., 2008). When one's self-concept is threatened, people may affirm an alternative element of one's self-concept (Steele, 1988). In these examples (and many others), the compensatory affirmation process is largely motivated by efforts to maintain the content of the meaning framework that was threatened. However, it is possible that these efforts were motivated by an arousal state that follows from the violation of any framework of expected associations (e.g., disequilibrium, dissonance, uncertainty).

If so, people may also be motivated to compensate for the violation of expected associations by affirming another framework of expected associations that is available, irrespective of whether the content of that framework is similar to that of the threatened framework. Several studies have suggested this is possible, insofar as the meaning frameworks threatened and the meaning framework affirmed in those studies shared little or no relation (save that they were both meaning frameworks to which the individual adhered; for a review, see Heine et al., 2006).

Recently, we conducted the first direct test of this hypothesis by demonstrating the affirmation of moral beliefs following the violation of an implicitly perceived perceptual anomaly

(Proulx & Heine, 2008), two meaning frameworks that share no content whatsoever. Furthermore, affirmation efforts ceased if participants were given the opportunity to misattribute any arousal they were experiencing to a placebo. These are findings that could not be accounted for by existing threat-affirmation theories that depict compensatory efforts in terms of content-specific meaning frameworks, such as social justice (Jost et al., 2004), symbolic immortality (Greenberg et al., 1994), control (Kay et al., 2008), or self-concept (Steele, 1988).

Overview of Studies

1. In the three studies that are reported here, we extended these findings and addressed three questions that have yet to be addressed in the fluid compensation literature: Would classic examples of absurdist art, literature, and humor evoke the same compensatory affirmation efforts as meaning threats associated with other fluid compensation processes (e.g., self-affirmation, Steele & Liu, 1983; terror management theory, Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989)?
2. Would an unusual experience evoke compensatory affirmation efforts only if people expect an experience that makes sense (i.e., the *uncanny* experience represents an *unfamiliar familiar*)?
3. If it is true that absurd experiences evoke compensatory affirmation efforts aimed at restoring meaning, could we demonstrate that one's need for meaning is heightened following an absurd experience?

Study 1 attempted to evoke compensatory affirmation following an absurdist parable by Franz Kafka. Whether it is Aesop's ant deriding the grasshopper for failing to plan ahead, or Christ's lesson of the prodigal son, most Western readers expect a parable to present an ideal for living or a note of encouragement—unless the parable is written by Kafka, who plays on this expectation, then violates it abruptly and fundamentally. We predicted that if a sense of the uncanny is evoked by Kafka's absurd (i.e., unfamiliar familiar) parable, participants would compensate for this meaning threat by affirming a viable meaning framework made available to them. Previously, we have demonstrated that absurd literature and manipulations of self-disunity lead people to abstract novel-meaning frameworks better (they learn an implicit grammar better; Proulx & Heine, 2009); however, there is no evidence that surreal artistic genres lead people to affirm other meaning frameworks. Specifically, we expected participants to demonstrate greater affirmation of alternative affiliative beliefs than participants who had read a familiar and predictable parable.

Study 2 focused on the role of familiarity with unusual events by determining whether the threatening nature of an

unusual experience can be reduced or eliminated if participants are cued to interpret the event as a *familiar* unfamiliar. Stated differently, we hypothesized that participants would experience absurdist humor as a meaning threat if they did not understand it to be an intended incongruity, that is, a joke. To test this hypothesis, we presented participants with an absurdist parody and either revealed to participants that what they were about to read was an attempt at absurdist humor or led participants to believe that what they were about to read was a genuine adolescent adventure story. Given the incongruous events of the story, we expected that participants would treat the parody as a meaning threat and subsequently engage in enhanced compensatory affirmation efforts when they believed they were reading a straightforward adventure story. We did not expect that participants who understood the events of the story to be a joke (and therefore a familiar kind of incongruity) or participants who read a joke whose standard punch line both raised and resolved an incongruity (Wyer & Collins, 1992) would experience the same need to reassert meaning and therefore would have less of a need to engage in compensatory affirmation efforts.

Study 3 attempted to heighten people's need for meaning by exposing them to an uncanny experience. We tested whether people exposed to absurdist art would report higher scores on the Personal Need for Structure scale (Thompson, Naccarato, Parker, & Moskowitz, 2001) when compared to participants in conditions that lacked absurdity. To test this hypothesis, we exposed participants to one of three works of art: representational art, abstract art, and absurdist art. Our prediction was that meaning would be easily found in the familiar representational image and that there would be no expectation of meaning in the wholly unfamiliar abstract image. We expected, however, that the *unfamiliar familiar* of the absurd painting would constitute an uncanny experience and heighten people's subsequent need for structure (i.e., meaning).

Study 1: Two Parables

Heinz Politzer (1962) wrote that "Kafka's importance derives from the fact that he was probably the first and certainly the most radical writer to pronounce the insoluble paradox of human existence by using this paradox as the message of his parables" (p. 22). In Kafka's parable *An Imperial Message*, this central paradox becomes clear only at the conclusion: If people do their utmost, they will certainly fail. In Study 1, we contrasted the unfamiliar paradox found in Kafka's *An Imperial Message* with the familiar message of success found in Aesop's *The Tortoise and the Hare*. Both parables refer to similar themes—life, persistence, and potential difficulties in goal attainment—yet they diverge in a crucial respect: Kafka's parable leads readers down a familiar path that ends in an unfamiliar way (a paradoxical conclusion), whereas Aesop's parable goes down a familiar path that ends in a familiar fashion (a sensible conclusion).

We predicted that Kafka's "unfamiliar familiar" parable would constitute an uncanny experience and evoke compensatory affirmation efforts analogous to other meaning threats (e.g., self-threat/self-affirmation; Steele & Liu, 1983). Conversely, we did not expect Aesop's parable to constitute an uncanny experience and therefore would not evoke compensatory affirmation efforts. In the current experiment, we gave participants the opportunity to affirm an alternative affiliative meaning framework by identifying with their cultural ingroup. We predicted that participants whose meaning frameworks had been disrupted by the Kafka parable would compensate for this meaning threat by later identifying with their ingroup more than would participants whose meaning frameworks were undisturbed by Aesop's parable.

Method

Participants. Fifty-two students (38 women) from the University of British Columbia participated in exchange for course credit. We excused participants who did not speak English as a first language to ensure comprehension of the materials. There were no main effects for gender or the Gender \times Condition interaction, and therefore analyses are collapsed across gender.

Materials and procedure. Participants were randomly assigned to one of two conditions: absurd parable or meaningful parable. In neither condition were participants told the author of the parable they were about to read. In both conditions, participants were instructed to read the assigned parable, pausing after each page for 10 s to visualize what they had just read.

For the absurd parable, participants read an abridged version of Kafka's *An Imperial Message*. In the story, an emperor sends out his most capable messenger to deliver a message. The determined messenger encounters an endless series of obstacles and is unable to find his way out of the palace. The story establishes an initial expectation of success, although the persistence of the messenger is futile and the message is never delivered. The moral: Despite one's best efforts, failure will ultimately be one's end.¹

For the meaningful parable, participants read a version of Aesop's parable *The Tortoise and the Hare*. In the story, a humble, hardworking tortoise and an arrogant, lazy hare take part in a race. The hare is so arrogant about his ability to win that before starting to run, he decides to nap and snack. The story establishes an initial expectation of the exemplary tortoise's success, and indeed the humble perseverance of the tortoise brings him to the finish line before the hare. The moral: Humility and hard work will ultimately be met with success.

Participants in both conditions then completed the Positive Affect Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) to assess whether mood had been influenced by either parable. Given that previous studies have not demonstrated a change in conscious affect following meaning

threats (e.g., Landau, Greenberg, Solomon, Pyszczynski, & Martens, 2006; Proulx & Heine, 2008, 2009), we did not expect mood differences. Following the PANAS, participants completed a distractor task (sorting objects according to their relative usefulness on a camping trip) because previous work on meaning threats has shown that a distraction period facilitates the emergence of meaning maintenance effects (Greenberg et al., 1994).

Next, participants were asked to complete a three-item Cultural Identity Scale ($\alpha = .79$), which asked them to evaluate how important was their birth country, nationality, and first language in to their identity (1 = *not very important*, 9 = *extremely important*). This dependent measure was chosen because of its affiliative nature and because matters of affiliation are irrelevant to the theme of the two stories (persistence and goal attainment). Last, participants completed a demographics questionnaire and were debriefed.

Results

As predicted, participants more strongly affirmed their cultural identity after reading Kafka's absurd parable ($M = 21.0$, $SD = 2.94$) than after reading Aesop's meaningful parable ($M = 18.2$, $SD = 4.33$), $F(1, 51) = 7.57$, $p < .01$, $\eta^2 = 0.13$. Participants in both conditions reported equivalent positive and negative feelings on the PANAS, both $F_s < 1$.

Discussion

If Kafka's goal with *An Imperial Message* was to provoke a meaning threat, our data suggest that he was successful. Participants who were presented with this uncanny parable later compensated for the meaning threat by affirming an alternative meaning framework, such that they evaluated aspects of their cultural ingroup as being more important to their identity than did participants who had read a story that did not violate meaning frameworks. If, as Freud (1919/1990) suggested, it is only the presence of the unfamiliar in a familiar setting that arouses a sense of the uncanny, then we may have found different results if participants assigned to the absurd parable condition had been given an expectation that the parable would contain incongruous elements, even if participants were not told what precisely those elements would be. If we had done so, the presence of something unusual would have been expected; therefore, we would have predicted that the unusual elements would not have constituted a meaning threat. Study 2 directly tested this question of the expected unexpected.

Studies 2 and 3 address two alternative explanations of the results of Study 1. In Study 1, it may have been that rather than the unfamiliar familiarity of the Kafka parable per se, the compensatory affirmation aroused by this absurdist literature was due mainly to (a) a defeatist moral that challenged common social justice beliefs (Jost et al., 2004) or (b) the

fact that participants were more familiar with the control condition parable *The Tortoise and the Hare*. In the ensuing two studies, the unfamiliar familiar experiences that constitute the meaning threat conditions are unrelated to matters of social justice and are not any more likely to have been encountered previously than control stimuli.

Study 2: Two Jokes

It is difficult to imagine that anyone tuning in to a program called *Monty Python's Flying Circus* could have no idea what they were in for. Nevertheless, an article in Britain's *Sunday Telegraph* (Hastings, 2006) revealed that the program was nearly canceled at the height of its popularity as a BBC executive on the program review board found it "disgusting" and "sadistic" (p. 11). In the 40 years since it first aired in 1969, *Monty Python's Flying Circus* has generated strong responses from viewers who found it hilarious or disturbing (or both). In Study 2, we used the potential meaning threat embedded in absurdist humor, which revels in nonsequiturs, random juxtapositions, iconoclasm, and the grotesque.

Monty Python created a story called *Biggles: Pioneer Air Fighter* (Chapman, 1974/2000) as a parody of World War I adventure stories that were popular with young boys in Great Britain. In the original stories by W. E. Johns (c. 1940-1960), James Bigglesworth and his friends, Algy and Ginger, earnestly and heroically thwarted the plans of those who challenged the British empire. The Monty Python version of *Biggles* finds the men smoking marijuana, exposing their genitals, and on the receiving end of a midair sexual assault by the Red Baron.²

There are many reasons why people find absurdist humor both funny and disturbing. For the purposes of the current inquiry, one dimension of absurdist humor is particularly relevant: the degree to which the incongruity is unfamiliar. Most humor theorists have noted that the seed of all humor is incongruity (e.g., Shultz, 1972; Suls, 1972; Wyer & Collins, 1992), although the standard joke is generally presented in a context wherein (a) a person expects to hear a joke and therefore the presence of incongruity is familiar, and (b) the incongruity (e.g., the punch line) allows for an interpretation that makes the incongruity ultimately sensible.³ Absurdist humor, in contrast, does not culminate in a punch line that restores meaning. Rather, one incongruous vignette generally segues into the next before sense can be made of what just happened (viz., "And now for something completely different"). If one is expecting no incongruities but incongruities are presented, and there is no resolution that renders the incongruities sensible, then this unfamiliar familiar experience should constitute the uncanny. Hence, in our model, these circumstances should elicit compensatory affirmation of an alternative meaning framework.

To determine the role of unfamiliarity in the experience of a meaning threat, we presented participants with Monty Python's *Biggles: Pioneer Air Fighter* in one of two contexts.

In one condition, participants were told that what they were about to read was a joke, a Monty Python parody of adventure stories for young boys (expected unexpected condition). In a second condition, participants were told that what they were about to read was a classic adventure story for young boys—without any indication of the incongruities that were to come (unexpected unexpected condition). In a third condition, participants read a traditional joke that culminated in a standard punch line that was unexpected but contained an interpretation that rendered the joke sensible (punch line joke condition). Then, in all conditions, participants were given the opportunity to affirm an alternative meaning framework by punishing a lawbreaker (a prostitute; see Proulx & Heine, 2008; Rosenblatt et al., 1989). We predicted that when Biggles was presented as a straightforward adventure story, it would constitute an uncanny experience and people would compensate by punishing the lawbreaker more than would participants in other conditions.

Furthermore, we predicted a relation between how funny participants found Biggles in the unexpected unexpected condition and the degree to which participants affirmed an alternative meaning framework by punishing a lawbreaker. Prior research has suggested that when people are unable to make sense of a joke, they find it less humorous (Ruch & Hehl, 1983). If so, we would expect that participants who found Biggles to be funny in the unexpected unexpected condition would have made sense of it—they “got” the joke, so to speak—and therefore would derive meaning from it. In contrast, those who did not interpret it as a joke, and did not find it funny, would be unable to make sense of what they had encountered and therefore would engage in compensatory affirmation efforts. Accordingly, we expected a negative relation between how funny participants found the least sensible joke presentation (i.e., Biggles unexpected unexpected condition) and much they affirmed another meaning framework.

Method

Participants. Ninety students (66 women) from the University of British Columbia participated in exchange for course credit. We excused participants who did not speak English as a first language to ensure comprehension of the materials. There were no main effects for gender or the Gender \times Condition interaction, and therefore the reported analyses are collapsed across gender.

Materials and procedure. Before coming to the laboratory, participants were randomly assigned to one of three conditions: unexpected unexpected Biggles, expected unexpected Biggles, or punch line joke. In all conditions, participants were then instructed to read the assigned story, pausing after each page for 10 s to visualize what they had just read.

For the unexpected Biggles condition, participants read a modified⁴ version of *Biggles: Pioneer Air Fighter* that was

preceded by a page that informed participants that what they were about to read was an adventure story for young boys written by W. E. Johns, along with a brief history of the Biggles book series. The story begins with Biggles, Ginger, and Algy taking off in a fighter plane, taking drugs, and engaging in homosexual innuendo before ending abruptly with the Red Baron suddenly appearing in their plane midflight, naked, and sexually assaulting them.

For the expected unexpected Biggles condition, participants read a version of *Biggles: Pioneer Air Fighter* that was preceded by a page that informed participants that what they were about to read was an absurd Monty Python parody of an adventure story for young boys written by W. E. Johns. The story that followed was identical to what was presented to participants in the unexpected unexpected Biggles condition.

For the punch line joke condition, participants read a joke about a zoo owner who hires a mime in a gorilla costume to replace his recently deceased star attraction. One day, the costume-clad mime falls into the lion pen and begins screaming for help. The lion leaps on him and says, “Shut up or you’ll get us both fired!”

Participants in all conditions then rated how funny they found the story they read (1 = *not funny at all*, 9 = *completely hilarious*) and completed the PANAS, followed by the same distracter task used in Study 1. Participants next read a fictitious arrest report about a recently incarcerated prostitute and imagined that they were the judge presiding over the case. They were asked to indicate the dollar amount of the bond that should be set for her (Rosenblatt et al., 1989). Last, participants completed a demographics questionnaire and were debriefed.

Results

Bond for prostitute. As hypothesized, participants in the unexpected unexpected Biggles condition set a higher bond for the prostitute ($M = 475.11$, $SD = 246.82$) than did participants in either the expected unexpected Biggles condition ($M = 346.14$, $SD = 232.28$) or the punch line joke condition ($M = 350.6$, $SD = 208.15$): overall ANOVA, $F(2, 87) = 3.26$, $p < .05$, $\eta^2 = .07$; planned comparison, $\Psi(2, -1, -1)$, $t(87) = 2.46$, $p < .05$, $d = .54$ (see Figure 1). Bonds set by participants in the expected unexpected Biggles and punch line joke conditions were not significantly different from each other, $p > .50$.

Mood assessment. There was no significant difference in scores on the negative affect subscale of the PANAS, $F < 1$, but there was a difference in scores on the positive affect subscale, $F(2, 87) = 4.82$, $p < .05$, $\eta^2 = .10$. A Tukey’s post hoc test revealed that what was driving this effect was that participants in the punch line joke condition ($M = 24.33$, $SD = 5.45$) reported more positive affect than did participants in the unexpected unexpected Biggles condition ($M = 19.89$, $SD = 6.58$, $p = .01$). However, the correlation between participants’ scores on the PANAS and their setting of the

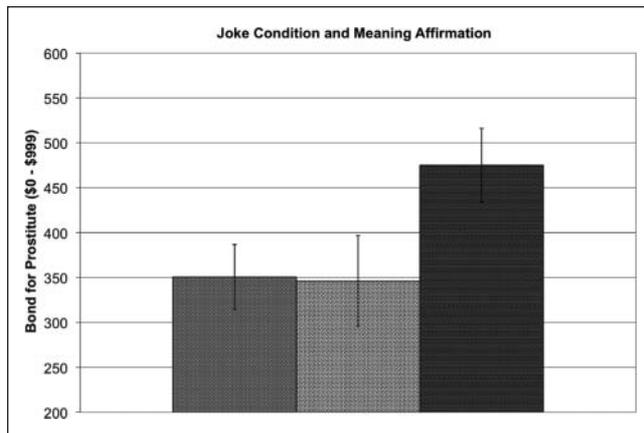


Figure 1. Bond set for prostitute, Study 2

Legend (left to right): punch line joke (medium grey), expected Biggles (light grey), and unexpected Biggles (black).

prostitution bond was nonsignificant in all three conditions ($ps > .15$).

Humor ratings. There was a significant overall effect of condition on humor ratings, $F(2, 87) = 6.36, p < .01, \eta^2 = .13$. A Tukey post hoc revealed that participants found the punch line joke funnier ($M = 6.41, SD = 1.68$) than the expected unexpected Biggles ($M = 4.62, SD = 2.33, p < .01$) or unexpected unexpected Biggles ($M = 5.00, SD = 2.12, p < .05$) stories. The two Biggles stories did not differ in humor ratings, $p > .50$.

We tested whether the degree to which participants found their story humorous would relate to the amount they set for bond. As predicted, there was no association between humor ratings and bond amount in the punch line joke and expected unexpected Biggles conditions ($rs = .15$ and $-.06, ps > .40$). There was, however, a significant negative correlation between how funny participants found the unexpected unexpected Biggles story and the amount they set for the bond ($r = -.34, p < .05$). The more that these participants experienced unexpected unexpected Biggles as a joke, and therefore resolved the story's incongruities, the less punitive they were toward the prostitute.

Discussion

Not unlike the BBC review board executive, participants who read the story of *Biggles: Pioneer Air Fighter* without being prepared for its incongruities experienced it as a meaning threat. Those participants responded by affirming an alternative meaning framework to a greater degree than did participants who read the same story while anticipating that it would be incongruous or participants who read a conventional joke. The conventional joke also introduced an incongruity, but importantly, the punch line also resolved the incongruity such that the story made sense. In contrast, neither the expected

unexpected Biggles nor the unexpected unexpected Biggles story offered any resolution of the incongruities they presented. If incongruity alone (or immoral behavior, for that matter) were sufficient for evoking compensatory affirmation efforts, we would have expected both of the Biggles conditions to evoke compensatory affirmation efforts. However, it was only when Biggles was presented in such a way that the incongruities were entirely unexpected (unexpected unexpected) that the story constituted an uncanny experience and evoked compensatory affirmation efforts. Hence, expectations played a crucial role in determining whether participants experienced the Biggles story as a meaning threat. Moreover, we found that the more participants viewed unexpected Biggles to be humorous, the less they experienced it as a meaning threat and engaged in meaning affirmation. In finding the story funny, it may be that participants in the unexpected Biggles condition interpreted the incongruous events as an attempted joke (i.e., expected unexpected), rendering it somewhat sensible.

Studies 1 and 2 demonstrated compensatory affirmation of alternative meaning frameworks following absurdist literature and humor, which suggests an elevated need for meaning following these uncanny experiences. Study 3 tested directly whether threatened meaning frameworks evoke a temporary increase in the need for meaning by using the Personal Need for Structure scale (Thompson et al., 2001). Study 3 also explored the role that expectation plays in what constitutes a meaning threat and used new stimuli to evoke meaning threats by having participants consider absurdist art or their own mortality.

Study 3: Meaning Threats and Personal Need for Structure

The central tenet of the meaning maintenance model is that people will affirm any available meaning framework following a given meaning threat even if the affirmed framework shares no content whatsoever with the meaning framework that was threatened. The meaning maintenance model hypothesizes that this is possible because whatever arousal state follows from a given meaning threat (e.g., feeling of the absurd, disequilibrium, uncertainty) is not specific to that threat but rather is implicated in a heightened need for subsequent meaning whatever the content of the subsequently affirmed framework. Therefore, we expected that people would evince a heightened motivation to identify structured relations in their environment following a meaning threat, regardless of its content. In support of this hypothesis, recent findings have demonstrated that following a variety of meaning threats related to personal control (Whitson & Galinsky, 2008) or absurdist literature and personal identity (Proulx & Heine, 2009), people exhibit a heightened motivation to identify unrelated patterns in their environment. In the following study, we drew a new line of sight on this phenomenon by demonstrating

a heightened personal need for structure (Neuberg & Newsome, 1993) following the uncanny experience of absurdist artwork.

Thompson et al. (2001) have argued that people vary in their desire to have meaning imposed on their life experiences and environment. They have argued that this variation constitutes a distinct personality trait that they labeled *personal need for structure*. Germane to the current analysis, personal need for structure has been shown to moderate the impact of meaning threats insofar as people who are low in personal need for structure are more tolerant of meaning violations and make only weak attempts to affirm alternative frameworks relative to people who are high in personal need for structure. For example, Landau et al. (2006) demonstrated that following a reminder of one's death, participants derogated artistic works that violated cultural norms (in this case, modern art). In this study, participants with low personal need for structure were relatively unfazed by the meaning threat implied by the reminder of their own mortality and evaluated modern art in an equivalent fashion as did participants in a control condition. Personal need for structure has been considered to be such a key component to the integration of emotion, cognition, personality, motivation, and behavior that Neuberg and Newsom (1993) concluded that it represents a core motivation that underlies various content-specific cognitive processes.

Although there exists a chronic trait disposition pertaining to the maintenance of meaning frameworks as measured by the Personal Need for Structure scale, momentary (state) motivations for clearly structured, unambiguous stimuli may also be measurable using the scale. If so, then we may expect participants to experience an elevated need for structured association following a meaning threat as measured by the Personal Need for Structure scale. Indeed, previous research has demonstrated that people become more "close-minded" following exposure to unrelated meaning threats (e.g., Hogg, 2006; Kruglanski & Webster, 1996; McGregor, 2006; McGregor et al., 2001). These findings point to the hypothesis that people exposed to absurdist art would report higher scores on the Personal Need for Structure scale as compared to participants who had not experienced a meaning threat. Also, as was the case for Study 2, we did not expect that just any incongruous artwork would constitute a meaning threat and evoke a heightened personal need for structure. Rather, we posited that only artwork that presents familiar elements in an unfamiliar setting (unfamiliar familiar) would constitute an uncanny experience.

To test these hypotheses, participants completed the Personal Need for Structure scale after they had considered their personal preferences for types of entertainment (a control condition), their own death, or one of three works of art: Constable's *Landscape With a Double Rainbow*, de Kooning's *Untitled XVI*, and Magritte's *The Son of Man* (see the appendix). This final example, Magritte's *The Son of Man*, is a painting whose familiar elements are innocuous but whose unfamiliar juxtaposition should constitute a meaning threat

for those presented with it. Abstract expressionist art, pioneered by painters such as Pollock, Kandinsky, and de Kooning, shares similarities with absurdist art insofar as it also presents images in an unfamiliar context. Nevertheless, both the context and the individual elements found in abstract art are unfamiliar. *The Son of Man* may constitute an uncanny experience because it presents the unfamiliar familiar, a realistic human figure with a realistic apple concealing his face. Yet de Kooning's *Untitled XVI*, which shows a swirling expanse of color, should not constitute the uncanny insofar as its complete absence of familiar elements should not elicit an expectation that the artwork should make any sense (thereby making it a familiar unfamiliar). Conversely, Constable's *Landscape With a Double Rainbow* is a representational piece that should not evoke the uncanny as the elements are familiar and arranged in a familiar manner. Hence, for very different reasons, neither de Kooning's nor Constable's work should constitute a meaning threat. If a heightened need for meaning underlies compensatory affirmation following a given meaning threat, then scores on the Personal Need for Structure scale may act as a "meaning thermometer," with participants reporting an elevated need for meaning following an appraisal of *The Son of Man* but not the other two art pieces.

Terror management research has demonstrated that contemplating one's impending death triggers meaning-affirmation efforts (e.g., Rosenblatt et al., 1989). Hence, a mortality salience condition should also lead to higher Personal Need for Structure scores. We included a mortality salience condition to allow us to directly compare the effects of absurd art and death reminders on personal need for structure. In sum, we expected participants to report higher scores on the Personal Need for Structure scale after absurd art or thoughts of death, relative to participants in either of the other two art conditions or the entertainment condition.

Method

Participants. One hundred twenty-four students (66 women) from the University of Minnesota participated in exchange for course credit. There were no main effects of gender or the Gender \times Condition interaction in the study, and therefore the reported analyses are collapsed across gender.

Materials and procedure. Before arrival at the laboratory, participants were randomly assigned to one of five conditions: representational art (Constable's *Landscape With a Double Rainbow*), abstract art (de Kooning's *Untitled XVI*), surreal art (Magritte's *The Son of Man*), entertainment, and mortality salience. Participants in the representational art, abstract art, and absurd art conditions were instructed to study a piece of art because they later would be asked to explain the meaning of the artwork.

Two additional conditions asked participants to consider self-related questions. In the entertainment condition, participants responded to two prompts about their favorite form of entertainment ("Please briefly describe the emotions that your

favorite form of entertainment arouses in you. Jot down, as specifically as you can, what you think happens to you physically as you enjoy your favorite form of entertainment.”). Similar prompts have been used as a control in numerous studies of terror management theory (e.g., Greenberg et al., 1994). In the mortality salience condition, participants were prompted to think about their own death (“Please briefly describe the emotions that the thought of your own death arouses in you. Jot down, as specifically as you can, what you think will happen to you as you physically die, and once you are physically dead.”). These items have been used in many tests of terror management theory (e.g., Landau et al., 2006).

After the manipulation, participants in all conditions completed the PANAS to assess mood. Next, participants completed a distractor task, which was the same as in Studies 1 and 2. Then participants completed the Personal Need for Structure scale. The measure contains 12 items (e.g., “I don’t like situations that are uncertain,” “I hate to be with people who are unpredictable”; $\alpha = .83$) to which participants responded using a 9-point scale (1 = *completely disagree*, 9 = *completely agree*). Last, participants completed a demographics questionnaire and were debriefed.

Results

Personal need for structure. As hypothesized, participants reported higher scores on the Personal Need for Structure scale in the absurd art ($M = 69.88$, $SD = 8.59$) and mortality salience ($M = 66.00$, $SD = 12.33$) conditions than did participants in the representational art ($M = 56.87$, $SD = 16.17$), abstract art ($M = 52.95$, $SD = 14.43$), and entertainment ($M = 57.24$, $SD = 13.42$) conditions, $F(4, 119) = 7.14$, $p < .001$, $\eta^2 = 0.19$, planned comparisons, $\Psi(1.5, 1.5, -1, -1, -1)$, $t(119) = 5.17$, $p < .001$, $d = .95$ (see Figure 2). The representational art, abstract art, and entertainment conditions did not differ significantly from one another ($F < 1$), nor did the absurd art and mortality salience conditions, $F(1, 50) = 1.36$, $p = .25$.

Mood assessment. There were no significant differences between participants’ scores on either the positive, $F < 1$, or negative affect subscale, $F(4, 119) = 1.57$, $p = .19$ of the PANAS as a function of condition.

Discussion

Although the Personal Need for Structure scale has typically been used as a measure of individual trait differences, the scale also appears able to detect temporary increases in people’s state need for meaning. Participants who experienced a meaning threat—whether it was an apple-obsessed man or a reminder of one’s mortality—experienced more need for structure than did participants who viewed nonthreatening art or thought about entertainment. The absurd art and mortality salience conditions, although evoking a relatively high need for structure, elicited statistically equivalent Personal

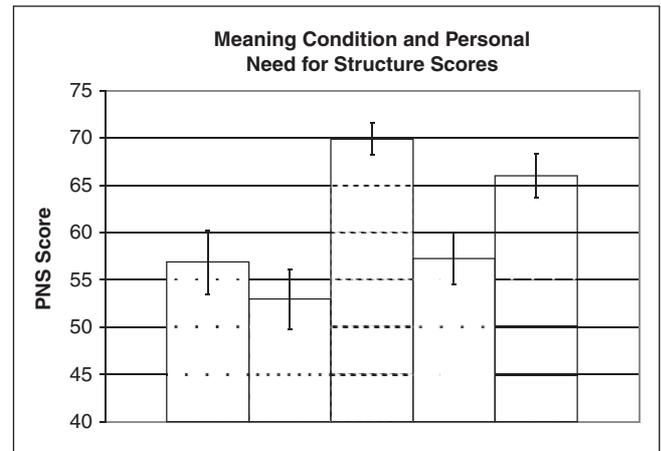


Figure 2. Personal Need for Structure scores, Study 3
Legend (left to right): representational art (vertical dashes), abstract art (horizontal dashes), absurd art (diagonal lines), entertainment (white with black dots), and mortality (black with white dots).

Need for Structure scores, thereby suggesting that they evince similar psychological responses to meaning disturbances. Moreover, the control conditions, which varied on myriad dimensions—from a focus on leisure time to unfamiliar images couched in an unfamiliar setting—were also experienced as nonthreatening to an equivalent degree. It remains an open question whether the same kinds of results would be obtained with other abstract expressionist or absurd images.

General Discussion

In *The Uncanny*, Freud began his inquiry as follows:

Naturally not everything that is new and unfamiliar is frightening; however, the relation is not capable of inversion. We can only say that what is novel can become frightening and uncanny; some new things are frightening but by no means all. Something has to be added to what is novel and unfamiliar in order to make it uncanny . . . and we will therefore try to proceed beyond the equation “uncanny” = “unfamiliar.” (p. 341)

The added variable in this equation, according to Freud, is the presence of the familiar, either within the unfamiliar element or surrounding it; it is the unexpected where we do not expect it that provokes this particular state of *uncanny* arousal. Freud comes to this insight after a painstaking etymological analysis of the word *uncanny* and a lengthy survey of literary works that arouse the experience. No one knows how Kafka came to this same conclusion, but by the 1915 publication of *The Metamorphosis* he had clearly mastered the art of evoking the unusual in steadfastly familiar settings with the clear intention of evoking the uncanny (Kafka, 1915/1996). By the middle of the 20th century, existentialists would be exploring the *feeling of the absurd* (Camus, 1955),

developmental theorists would be discussing *disequilibrium* (Piaget, 1937/1954), and social psychologists would be framing a wide array of social behaviors as attempts to reduce *cognitive dissonance* (Festinger, 1957) and *uncertainty* (Hogg & Mullin, 1999; McGregor et al., 2001; Van den Bos, 2001).

Following from these artists' and scholars' perceptiveness, we tested the following hypotheses: (a) absurdist art and literature would constitute uncanny experiences and evoke compensatory affirmation efforts of the same kind and magnitude as meaning threats associated with other threat-affirmation theories (e.g., system justification theory, Jost et al., 2004; terror management theory, Greenberg et al., 2004; compensatory control, Kay et al., 2008), (b) absurdist humor would only constitute an uncanny experience if its incongruity was wholly unexpected (i.e., the unfamiliar familiar), and (c) unrelated meaning threats would evoke a temporarily heightened general need for meaning (i.e., personal need for structure).

We tested these hypotheses in three experiments. Specifically, we demonstrated that people affirm alternative meaning frameworks following exposure to absurdist art and literature (Studies 1 and 2). We found that meaning threats only occurred when the incongruous events were unexpected (Study 2) and that people experienced a general need for meaning following a meaning threat (Study 3). Although the Kafka parable in Study 1 was less familiar to participants than the Aesop parable, which thus presents a potential confound for that study, we note that conceptually similar results were obtained from Studies 2 and 3 in which all of the stimuli were novel to participants. Hence, familiarity by itself cannot account for these results. It is also notable that we presented participants with actual examples of absurd art and literature, the kinds of scenes that people may encounter in their daily lives when they take classes at a university, join a book club, visit libraries, and attend art galleries. Nevertheless, we acknowledge that it is unclear whether fluid compensatory responses to meaning threats are common across people in diverse countries and cultures, as meaning maintenance studies thus far have largely been conducted with North American participants.

It is unclear what role expectation and familiarity may play with meaning threats associated with other theoretical frameworks, such as cognitive dissonance theory (Festinger, 1957), system justification theory (Jost et al., 2004), social identity theory (Hogg & Mullin, 1999), self-affirmation theory (Steele, 1988), and terror management theory (Greenberg et al., 1994). Also, the degree to which participants found humor in the unexpected Biggles conditions determined the degree to which they found it to be a meaning threat. The results of our studies raise intriguing questions about interpretation, familiarity, and coping: If participants treat potential meaning threats as a joke (e.g., gallows humor), are the meaning threats made sensible and the threat therefore diminished? Why it is that some individuals easily find humor in potential meaning threats whereas others are disturbed?

One might wonder what exactly is this uncanny feeling that we argue follows from absurd experiences. Given the array of theoretical frameworks in psychology that conceptualize some analogous mode of arousal as causally implicated in meaning maintenance efforts (e.g., disequilibrium prompts assimilation, Piaget, 1937/1954; dissonance leads to accommodation, Festinger, 1957; uncertainty evokes compensatory affirmation, e.g., McGregor et al., 2001), it is remarkable how little is known about the nature of this hypothesized arousal state. Research is needed to address the specific situations that elicit this arousal state, why it may motivate one kind of meaning maintenance effort rather than another, what precise causal role it plays in threat-compensation processes, and whether the same arousal state is implicated in different threat-compensation processes.

There is good reason to believe that the arousal state posited by so many for so long is no phantom. For example, Mendes et al. (2007) found that a cardiovascular "threat response" following from experiences of personal discrimination also follows from innocuous violations of expectation, such as conversing with a Chinese experimenter who speaks with a pronounced Alabama accent. In other studies, analogous reports of conscious negative arousal followed from the violation of committed beliefs, even if the violation represents good news for the participant (Plaks & Stecher, 2007). Many studies identify modes of neurocognitive arousal that follow from different expectancy violations, both in adults (Inzlicht et al., 2009) and children (Zelazo, 2009). Even if participants merely recall this feeling (Van den Bos, 2001), they engage in compensatory affirmation efforts of the same kind and magnitude as those that follow from meaning threats themselves (e.g., mortality salience prime). As noted, if participants are given the opportunity to misattribute any arousal they are experiencing following a variety of unrelated meaning threats (Kay et al., in press; Proulx & Heine, 2008; Zanna & Cooper, 1974), compensatory affirmation efforts are extinguished.

Based on these and other findings, a convergent picture emerges that renders it reasonable to assume that some common mode of arousal follows from any meaning violation (e.g., social justice threat, Jost et al., 2004; control threat, Kay et al., 2008; mortality threat, Greenberg et al., 1994; self-threat, Steele, 1988), and this arousal state is causally implicated in subsequent meaning maintenance efforts (e.g., assimilation, accommodation, affirmation, abstraction). Perhaps this arousal state will turn out to be a syndrome of related physiological arousal (e.g., vasoconstriction) and brain activation states (e.g., ACC activation). Or, perhaps, there is no consistent "syndrome of arousal" that follows from meaning threats, even though many unrelated threats provoke identical compensatory affirmation efforts. In the coming years, work from a variety of threat-compensation perspectives will continue to specify the arousal state(s) that follow from violations of expected associations, while continuing to map the expected associations that account for meaning maintenance efforts.

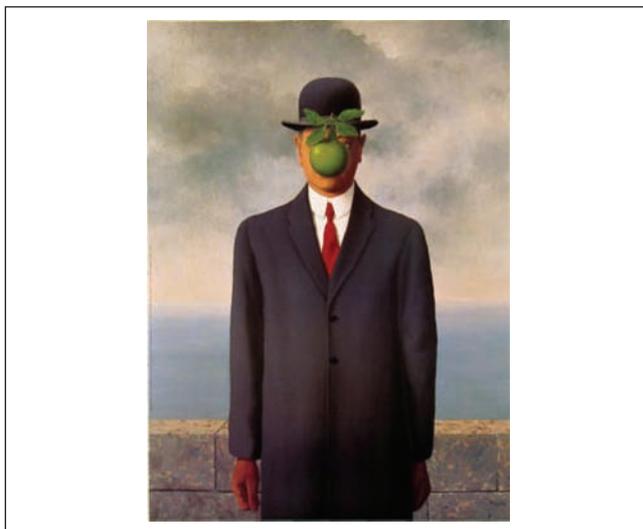
Appendix



Representational Art



Abstract Art



Absurd Art

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Declaration of Conflicts of Interest

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Notes

1. All written manipulations for the present studies are available online at <http://www.psych.ubc.ca/~heine/absurdstories.pdf>
2. Don't ask.
3. For example,

A young Catholic priest is walking through town when he is accosted by a prostitute. "How about a quickie for twenty dollars?" she asks. The priest, puzzled, shakes her off and continues on his way, only to be stopped by another prostitute. "Twenty dollars for a quickie," she offers. Again, he breaks free and goes on up the street. Later, as he is nearing his home in the country, he meets a nun. "Pardon me, sister," he asks, "but what's a quickie?" "Twenty dollars," she says. "The same as it is in town." (Wyer & Collins, 1992, p. 667)

4. The number of nonsequiturs and double entendres was slightly increased as our pilot testing revealed that much of the innuendo from the original Biggles story was subtle enough that several participants did not notice that anything unusual had transpired.

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